# V
# Architectural and Landscape Design

## 1. Intent

**Quality.** The quality of individual buildings contributes to the sense of place and permanence. These architectural and landscape standards apply to individual buildings, lighting, utilities, walls, and landscape design, with the intent of creating a high quality built environment with lasting character that draws on southwestern regional styles and traditions. Individual design expression and the diverse character of the land use districts can all flourish within an overall framework of quality.

**Climate.** Architectural elements should respond to unique southwestern climatic conditions. This means providing shade as relief from harsh sunlight and heat, and conserving water.


Suburban Residential Neighborhood

**Views.** In order to fully understand the rationale for the regulations related to the visual qualities of buildings and landscaping, it is necessary to understand the importance of the area culturally and to the rest of the city. Ruth Eisenberg in communication with members of Save the Volcanoes expressed the visual significance of the Escarpment in 1980: "When people say 'volcanoes' they do not mean the cones and nubbins alone…. They are referring to the desert sloping up gradually, the expanse ending in the row of cones which seem to accentuate our sky, especially at sunset." Many points throughout the city offer panoramic views of the full length of the volcanic flows.

An analysis of the views of Volcano Heights and from Volcano Heights provides the basis for regulations dealing with color, reflectivity, lighting, building materials, and landscape design. To minimize the visual impact of development, predominant colors used on structures will blend with the natural colors of the mesa.

## 2. View Shed Findings

The Volcano Heights Plan addresses preserving views and visual experiences especially related to the volcanic cones, the buffer edge of the Escarpment, Rio Grande, and Sandia Mountains. A background discussion related to these concerns is contained in *Conditions and Considerations, The Meaning of Place: Natural / Cultural Features.*

The objectives include preserving views:

- Of the Volcanic cones from within the Volcano Heights Plan Area and the rest of the city of Albuquerque to the east,
- Minimizing the visual impact of Volcano Heights development, especially along the Escarpment edge, to the city of Albuquerque,
- Protecting views from key cultural locations including from the Volcanic Cones and the Petroglyph cluster within the North Geologic Window to the Rio Grande and the Sandia Mountains; minimizing the visual impacts of Volcano Heights development from these locations.

The Volcano Heights Plan establishes building height restrictions consistent with these objectives. These objectives are also addressed through architectural standards such as building materials, reflectivity, and color. Others are achieved through providing facilities such view points on the Escarpment and calling for streets to be aligned to preserve views.

## *Analysis*

A View Shed analysis was conducted to determine what could be seen from different locations within Volcano Heights and the city assuming that the area was completely developed at the maximum heights allowed. This was done by building a 3-D computer model of the land use plan and then moving the "observation point" to different locations. The light green shading indicates what can be seen from the observation point.

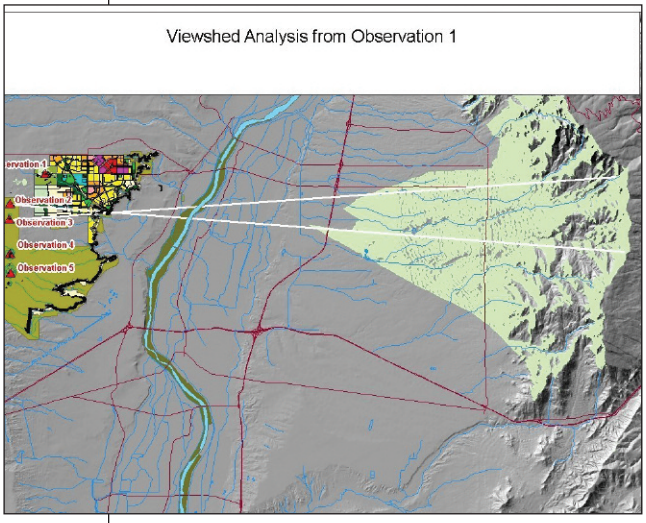
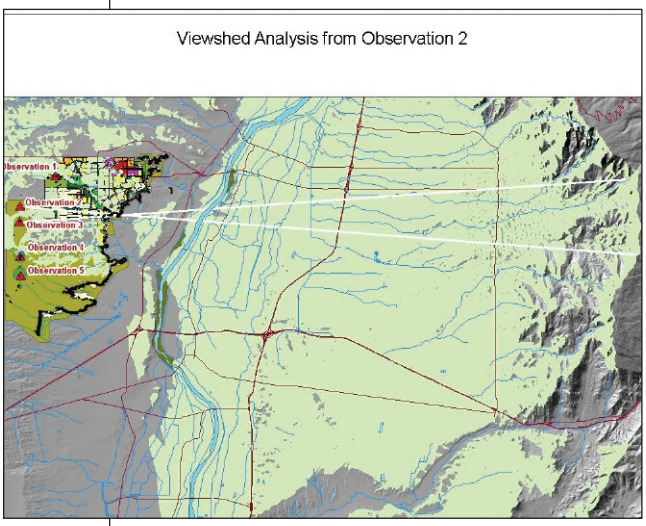



**Exhibit 27**
View shed Analysis from Observation Point 1

### Views from Volcano Heights Looking East

The views from Volcano Heights to the east are shown in maps of Observation Points 1 and 2. (Exhibit 27) Observation 1 is from a point within the North Geologic Window containing a number of Petroglyphs. The Planning Team was told that active Pueblo cultural practices call for protecting this view. The map indicates it will be possible to see from the foothills to the crest of the Sandia Mountains from this location assuming development as in the land use plan. Apparently it will not be possible to see the Volcano Heights buildings from this location.

An analysis was conducted from each of the Volcanic Cones as separate observation points. Observation 2 from the northernmost volcano is typical of the results. From the northernmost Volcanic Cone one has an almost uninterrupted view to the east toward the Volcano Heights Plan Area, the Rio Grande, city of Albuquerque, and Sandia Mountains beyond.




View shed Analysis from Observation Point 2

Both the maps above indicate the part of the Sandias viewed within lines that start at the tops of the two northernmost volcanoes and move through the concentration of Petroglyphs on the Escarpment at the Boca Negra arroyo. As indicated in *Conditions and Considerations, The Meaning of Place: Natural/ Cultural Features,* an important path was from the former Pueblos along the Rio Grande along the Boca Negra arroyo to the North Geologic Window and these two volcanoes. Pueblos place importance on the straight line connections between landscape features. In this case, these lines frame the least steep and most accessible route from the Sandia foothills to the Crest. It is assumed that this path was used to access shrines and other resources on the face and crest of the Sandias.

## Views from Albuquerque to Volcano Heights

Observation 6 (See Exhibit 28) is from an observation point at Paseo del Norte and Golf Course Rd. This map indicates that the only buildings observable from this location are in a small portion of the La Cuentista subdivision.

This situation changes materially when the observation points are moved further east and south. The views from the overpass at Interstate 25 and Paseo del Norte and from a point at the University of New Mexico (Observation 9) are nearly the same. One is able see development on the eastern portion of Volcano Heights – SAD 227, the eastern part of the proposed SAD 228 area, and the eastern parts of the Town Center and the Universe Village Center. Importantly, one is also able to see the lower density executive and rural residential areas to the west of the Universe Village Center to the Monument. The views appear to be unimpeded from these locations in the city to the open space in the Petroglyph National Monument.

## *Conclusion*

The View Shed analysis found that:

- Important views from locations within Volcano Heights to the Albuquerque basin and the Sandia Mountains are protected; and
- Development within Volcano Heights will be visible from most of the city of Albuquerque; hence care needs to be taken in to achieve non-visually intrusive development especially in the lower density residential areas and in all of Volcano Heights.

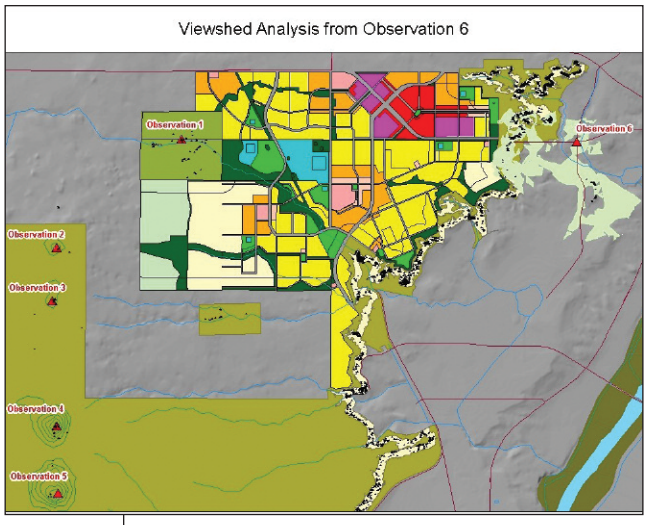
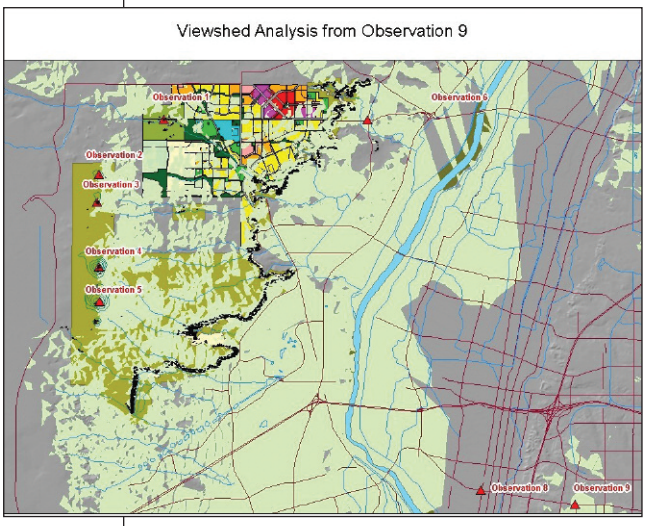



**Exhibit 28**
View shed Analysis from Observation Point 1




View shed Analysis from Observation Point 2

## 3. Architectural Design Standards

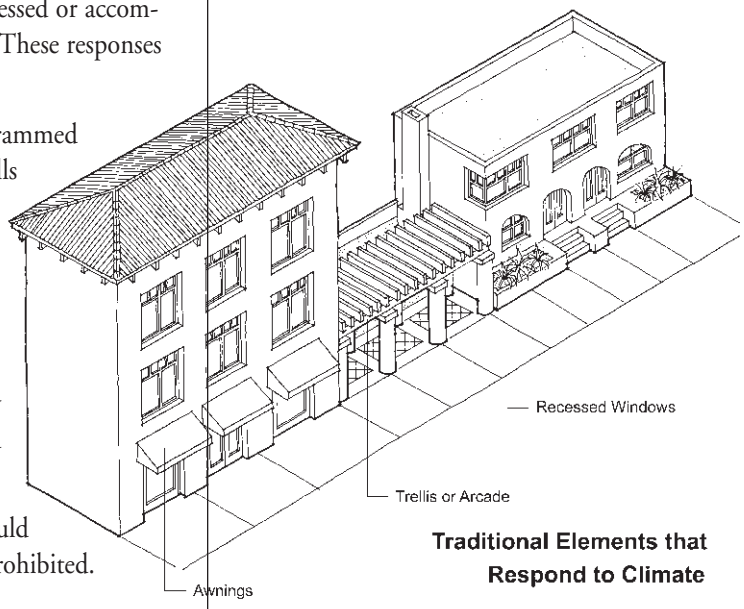
Architectural Design Standards should be applied to all uses.

**Climatic Response**. Building elements that shelter pedestrians such as verandas and arcades are encouraged. Windows and openings should be deeply recessed or accompanied by eaves, verandas, deep eaves, or metal awnings (not fabric). These responses to climate reduce solar gain with traditional southwestern features.

**Building Walls.** Walls should be stucco, brick and tile masonry, rammed earth, adobe, native stone (or synthetic equivalent), or straw bale. Walls may be clad or plastered with stucco, brick and tile masonry, cement tile (e.g. Hardy-board), or native stone (or synthetic equivalent). Wood and reflective panels should not be used as an exterior finish. Stucco and concrete should have integral color. For free-standing walls see *Walls & Fences* in *Landscape Design*.

**Posts & Beams.** Exterior posts and beams should consist of heavy timbers, concrete or steel. Beams made of composition or laminated wood should not be used.

**Roofs.** The slope of roofs should not exceed 3:12. Sloped roofs should be metal, or cement, ceramic, or clay tile. Reflective roofs are prohibited. Parapets should hide flat roofs. Mansard roofs are prohibited.




**Traditional Elements that Respond to Climate**

**Windows**. Windows shall be double-hung, single hung, awning, or casement types. Mullions should be "over glass." The horizontal dimension of any window opening shall not exceed the vertical dimension; posts with a width of at least 4 inches may be used to separate openings.

Glass on any surface shall not be reflective or mirror glass, that is, glass having greater than 15% average daylight exterior reflectance. Highly reflective or mirrored glass is prohibited. Glass for non-residential and mixed-use areas uses shall be clear with light transmission between exterior and interior rated at a minimum of 90% for the ground story and at least 75% for the upper stories (modifications permitted as necessary to meet any applicable building and energy code requirements).

**Entrances, Porches, Stoops & Vestibules.** See *Building-Street Relationships* described earlier in the Urban Design Element.

**Detailing.** Proper detailing that is revealed is preferred over poor detailing obscured by facia boards. Reveal well-executed connections where practical. Veneer materials should extend around exterior corners at least one foot. To avoid cracking and provide human scale, stucco should be accompanied by correctly-spaced and grommeted joints. Flashing should match roof or building color.

**Color.** Building walls and roofs in lower density residential areas should not use bright colors (accept as accents). Buildings throughout should not use highly reflective surfaces. Colors used on building walls and roofs within all lower density residential areas (Suburban Residential, Rural Residential and Rural Estates), should be use earth tones and reflectivity standards consisting of "Approved Colors" specified in Appendix E of the *Northwest Mesa Escarpment Plan (NWMEP)*. Mechanical devices, roof vents and screening materials are also subject to this regulation, as are fences and walls. Trim

materials constituting less than 10% of the façade's opaque surface may be any complementary color.

Within Town, Village centers, Neighborhood Mixed-Use, Office Campus, and Urban Residential Districts, colors outside the Approved Colors list may be used.

**Service Areas.** Service areas should not be visible from streets or public open spaces. They should be located away from streets or recessed within the building envelope. Service areas recessed within the building envelope, and facing streets or public open spaces, should not comprise more than 20% of a building's linear frontage; and should be accompanied by roll-up doors. Free-standing equipment and refuse containers should be screened from view of streets and public open space.

**Commercial Signage.** Signs should complement adjacent architecture. Appropriate signage includes blade signs, awning signs, and wall-mounted or hanging metal panel signs. Internally illuminated box signs, billboards, roof-mounted, free-standing, any kind of animation, and painted window signs, and signs painted on the exterior walls of buildings are not allowed. No flashing, traveling, animated, or intermittent lighting shall be on the exterior of any building.

Wall signs are permitted within the area between the second story floor line and the first floor ceiling within a horizontal band not to exceed 2' in height. Letters shall not exceed 18" in height or width and 3' in relief. Company logos or names may be placed within this horizontal band or placed or painted within ground floor or second story office windows and shall not be larger than a rectangle of 8 sq. ft. Projecting signs may not be more than 24" by 48" and a minimum 10' clear height above the sidewalk and may be hung below the third story level. Signs may not project more than 36" perpendicular to the right of way beyond the façade.

Awnings shall be cloth or equivalent, metal, or glass. "Quarter-cylinder" awning configurations are not permitted. Lettering on awnings is limited to 9" in height.

**Equipment & Antennas.** Mechanical equipment and antennas should not be visible from a street or public open space. Equipment may be recessed within the profile of the building, or it may be screened architecturally, such as though the use of false dormers, parapets or cupolas. Roof-mounted heating and air conditioning equipment shall be fully screened from views, both from the ground and from the escarpment. Screening materials shall be of Approved Colors in Appendix E of the NWMEP.

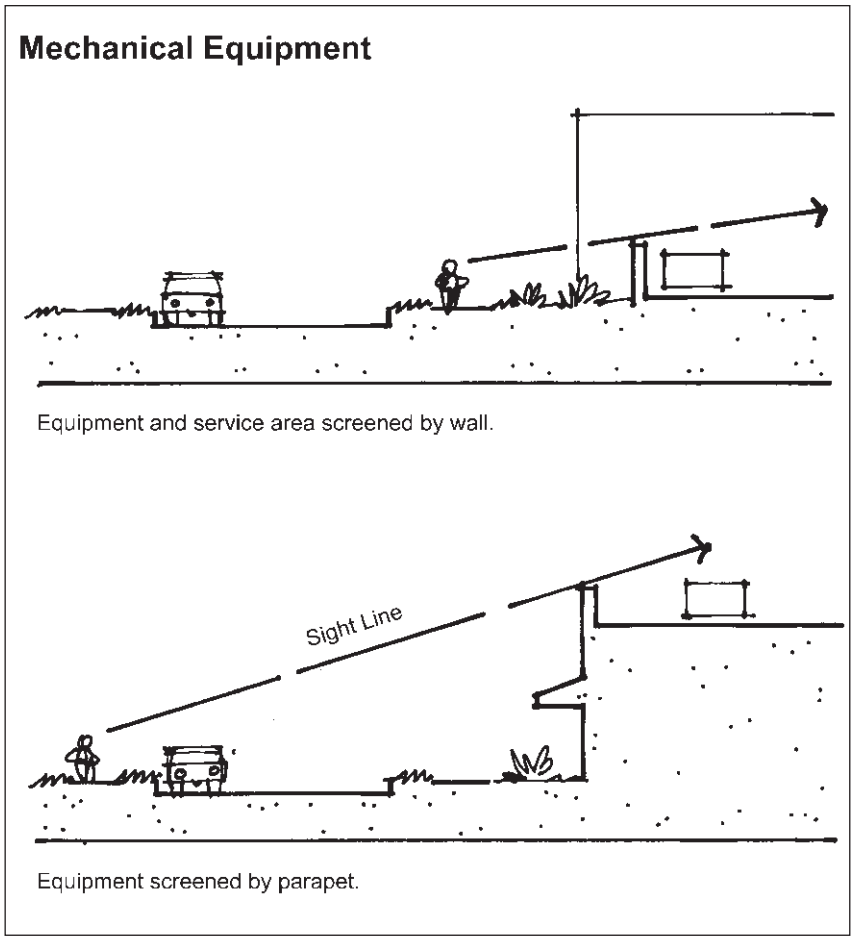



**Diagram 27**

**Energy-Efficient Buildings.** Buildings that are energy efficient are encouraged. Desirable features include:

- interior daylighting and fluorescent lighting;
- shaded windows and heat-exchange units;
- super-insulated low-emissive windows;
- natural cross-ventilation;
- passive solar heating and hot water;
- highly efficient appliances, heating and cooling systems; and
- the generation of electricity through wind generation and photovoltaics.

**Arroyos, Petroglyph National Monument Buffer, and Other Public Open Space Corridors.** See "Scenic Routes in the Open Space element" below.

## 4. Landscape Design Standards

**Walls & Fences – Height & Placement.** Walls and fences are allowed only in the Development Envelopes (Backyard portion) of houses in Suburban Residential and in the Development Envelopes of Executive Residential and Rural Residential, within properties facing the Petroglyph National Monument (the "Monument"), along arroyos with prudent line rights of way, and along the Scenic Corridors (see Open Space).

In the Town Center, Village Centers, Neighborhood Mixed Use, and Urban Residential areas, walls shall be constructed within 3 feet of street-facing property lines, where buildings are not within 10 feet of the property line. Walls and fences should not exceed a height of 48 inches where allowed within street-facing setbacks (except for columns that support arcades or trellises). Fences and walls should not exceed a height of 72 inches along rear and interior side property lines, where they are outside of required street-facing setbacks.

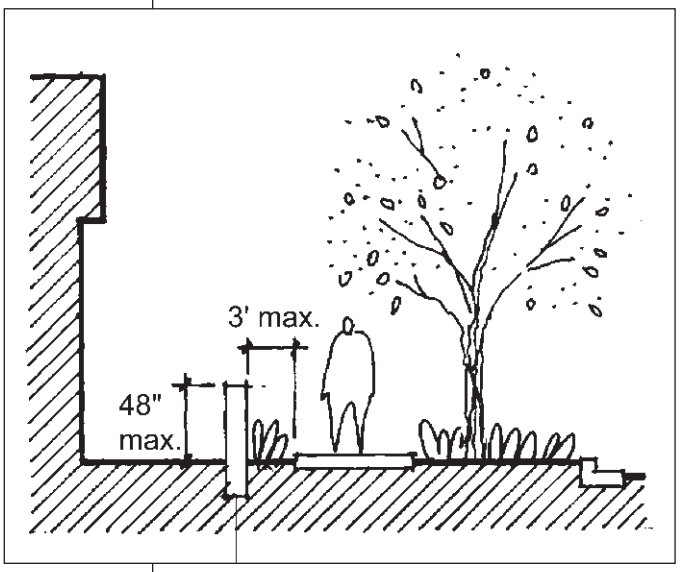



**Diagram 28**

**Walls & Fences – Materials & Design.** Walls should be stucco, brick and tile masonry, rammed earth, adobe, native stone (or synthetic equivalent) or straw bale. Walls may be clad or plastered with stucco, brick and tile masonry, or native stone (or synthetic equivalent). Stucco and concrete should have integral color (see *Color* above). The end of walls should have a pier or pilaster that is at least 12 inches in width, to give a substantial appearance. Fencing should be post & wire, split-rail, or coyote fencing. Wood board, cyclone, chain-link, and razor-wire fencing are prohibited.

**Yards & Courtyards.** An irrigated zone of up to 600 square feet per unit is allowed per unit within the Town Center, Village Center, Neighborhood Mixed-Use, and Urban Residential Zones. Xeric plants are permitted as specified in Plant List B below.

Please refer to the *Conservation Development & Development Envelopes* section for the landscape standards in the following Zones: Suburban Residential, Executive Residential, and Rural Residential.

**Pedestrian Walkways.** Arcades, trellises awnings, and/or trees are encouraged along pedestrian paths for shade and spatial definition. In parking lots, Pedestrian Walkways should not extend more than 75 feet without one of these features.

**On-Lot Trees.** Where buildings are placed more than 10 feet from a street-side property line, at least one tree should be planted per property within the street-side setback. Properties with a long street frontage should have one tree every 50 feet or less.

**Lighting.** Lighting should have a cut-off angle that directs light downward and only toward the property on which the light source is located. Light fixtures should be of a type that throws light downward and have baffles, hoods or diffusers so that no light point source should be visible from a distance greater than 1000 feet. On-site light poles should not exceed a height of 16 feet. High-intensity discharge lamps and sodium lamps should not be used. For properties adjacent to Arroyos, Petroglyph National Monument Buffer, and Other Public Open Space Corridors, see *Scenic Corridors* below. For street lighting, see *Transportation.*

**Overhead Utilities.** Construction of new overhead utilities is prohibited. The City should work with the electric utility company to explore ways to re-route or place major overhead utility transmission lines underground, especially along Universe at the Village Center locations.

**Gateway Monuments.** Pillars or walls may be built at entry points to neighborhoods and projects. Walls should not be more than 12 feet long and conform with *Wall & Fence* guidelines above. Pillars should not be more than 3 feet in width and 10 feet in height. Pillars and walls should be stucco, brick and tile masonry, rammed earth, adobe, native stone (or synthetic equivalent) or straw bale. Walls may be clad or plastered with stucco, brick and tile masonry, or native stone (or synthetic equivalent). Stucco and concrete should have integral color (see *Color* above).

**Archeological Sites.** Development, trails, and recreation areas should be set back at least 50 ft. from prehistoric Petroglyphs or other sites with high archeological value, unless designed under the guidance of a qualified archeologist. Archeological sites may be fenced off using acceptable fencing (see above) not exceeding 5 feet in height. Interpretive signage and exhibits are encouraged where major trails are near prominent archeological features, but should not exceed 3 feet in height.

**View Corridors.** Views should extend from archeological sites of major cultural importance toward the Sandia Mountains to the east, the two northernmost volcanoes to the west, and the Rio Grande and should be considered in site and master planning. (See View Shed Analysis)

**Grading.** Cut and fill slopes should be no steeper than 3:1 on average; and retaining walls should not exceed 4 feet in height unless incorporated within a building's foundation. Graded areas should maintain the character of the natural terrain by varying gradients, undulating contours, and rounding the toe and crest of any slope greater than 10 feet in height. Fill should be limited to a height of 4 feet.

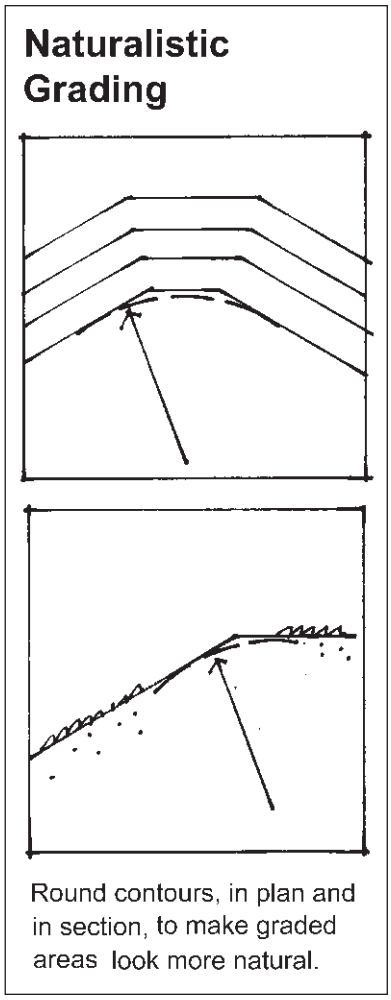
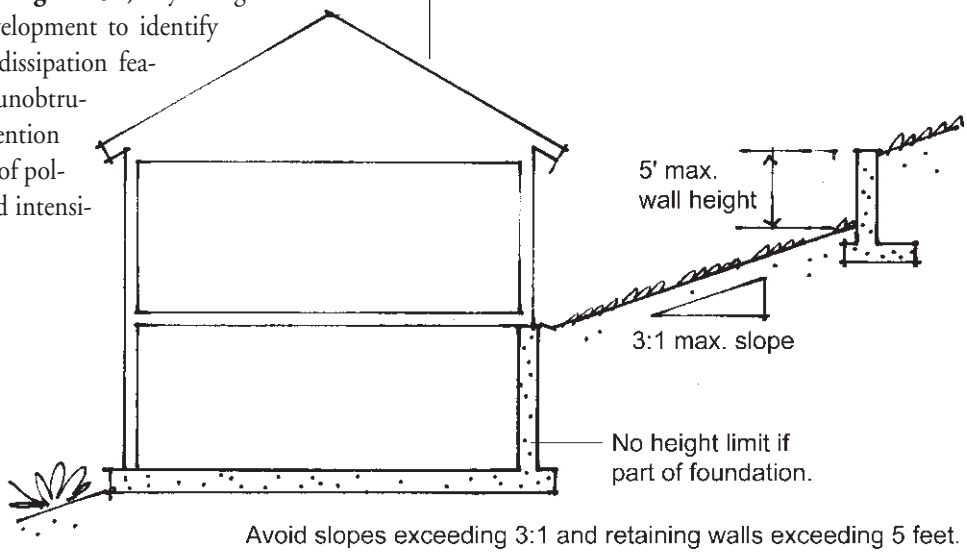



**Diagram 29**

**Stormwater Quality and Management. (see diagram 31)** Hydrological study and design may be required of new development to identify appropriate stormwater detention and energy dissipation features. Development projects shall incorporate unobtrusive stormwater features that facilitate the detention and infiltration of stormwater, and the filtration of pollutants from urban run-off. At all densities and intensities, appropriate techniques include:

- permeable pavers & concrete,
- infiltration beds place below paved areas,
- stone-filled reservoirs and dry-wells, and
- small "rain gardens" (low-lying with moisture-tolerant grasses, wildflowers, shrubs, and trees); and
- vegetated swales (in courtyards and street medians and planting strips).



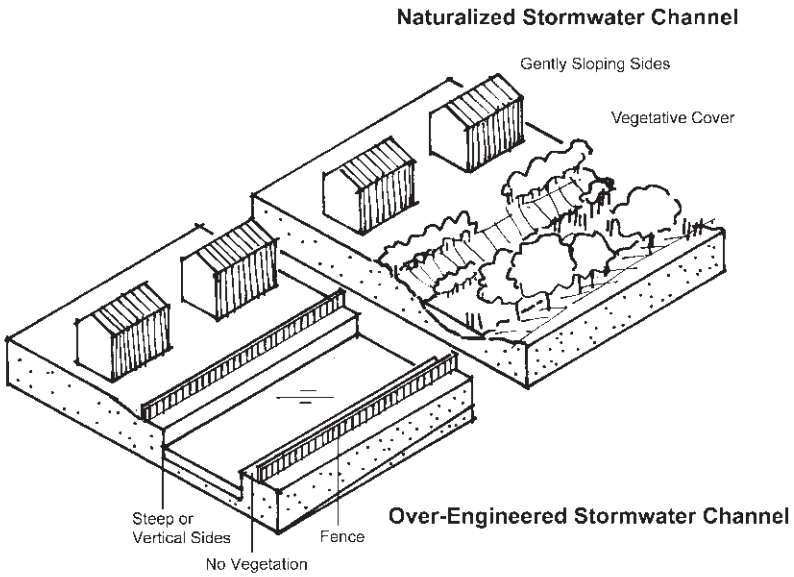

**Alternatives to Mass Grading**

**Diagram 30**

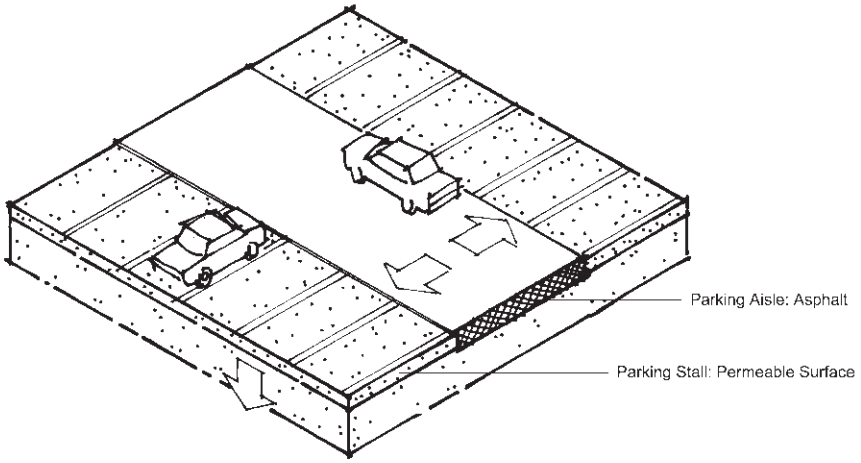
Materials and treatments used for stormwater management shall be natural in appearance. Channels lined by concrete or rip-rap are prohibited, unless necessary for public safety. Fencing shall be avoided, meaning that the bottom slopes of detention basins should be designed for safety. For properties adjacent to Arroyos, Petroglyph National Monument Buffer, and Other Public Open Space Corridors, see *Scenic Corridors* below.

**Conservation Development.** In Conservation Development areas, only native plants as contained in Plant List A should be used in Community Conservation Areas and areas held in Conservation Easements. See Conservation Development standards (in section preceding) for other open space requirements.

## Benefits of Natural Drainage




## Infiltration Opportunities: Parking Lots

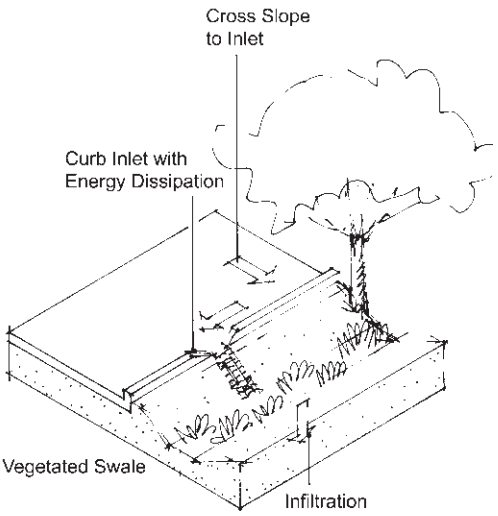



Parking stalls receive less wear and make good locations to increase infiltration through the use of permeable materials.

**Diagram 31**

## Swale Streets

Urban Curb with Inlet to Swale




Urban Curbless Drainage to Swale

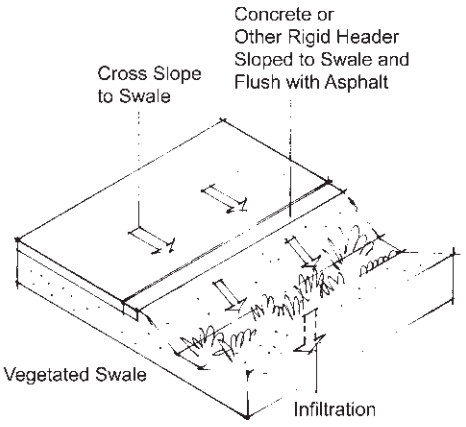



**Diagram 32**

## 5. Appropriate Planting Lists

The purposes of directing landscaping plants are to: reduce water usage, maintain the character of native plants now existing in the Monument, and to provide a harmonious landscape image.

Two plant lists are recommended to guide landscaping within Plan Area. More specific landscaping for subareas of Volcano Heights should be provided in required site plans and master plans.

**List A - Petroglyph National Monument Plant List.**

These are the plant species that were inventoried by the National Park Service in 1994-5 and represent almost 200 plants (amended). This plant list is in the Appendix.

**List B - Xeric Plant List:**

The plant species are the official xeric or low-water use plant list of the City of Albuquerque Water Conservation Office. The majority of the list is low and medium water-use plants. Some high-water use plants are also listed in order to classify them as such in implementation of the water conservation program. This xeric plant list is extensive and is maintained by the City. Contact the City of Albuqerque Water Conversation Office to get the most current information.

Where landscaping follows the Plant List B, at least 70 percent of the landscaped area should be covered by live plants in contrast to rock.

### *Table 14*

X= Allowed

| | **Plant List A Native** | **Plant List B Xeric** |
|---|---|---|
| Conservation Areas (Arroyos, Buffer Areas, and so on) | X | |
| Rural Residential, Executive Residential, and Suburban Residential Outside Development Envelope | X | |
| Rural Residential, Executive Residential Inside Development Envelope | | X |
| Suburban Residential Inside Development Envelope | X | |
| Suburban Residential Inside Backyard | | X |
| Town Center, Village Center, Neighborhood Mixed-Use, Office Campus, Urban Residential | | X (1) |
| Scenic Corridor | X | |
| Other Roads | | X (1) |

*(1) Landscaping within this range to be determined at the level of specific plans for these areas and roads.*